

Engelmann (Geo. J.)

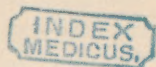
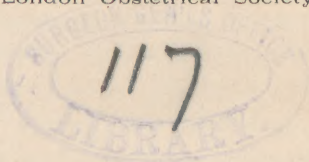
TIME OF CONCEPTION

—AND—

Duration of Pregnancy

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Fellow of the American Gynecological Society; Fellow of the
London Obstetrical Society, etc.



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TIME OF CONCEPTION AND DURATION OF PREGNANCY.

BY GEO. J. ENGELMANN, M. D., *Fellow of the American Gynecological Society; Fellow of the London Obstetrical Society, etc.*

IT is not often that we can positively trace conception to a single, and, moreover, a *first* coitus; I deem it accordingly of sufficient interest to relate three cases, recently seen by me, in which we can satisfactorily determine the duration of pregnancy, the coincidence of impregnation and insemination, and the time of conception in its relation to the menstrual period.

It is with reference to this latter point that these cases were most especially interesting to me, as establishing by clinical facts the correlation of ovulation and menstruation, which I have anatomically demonstrated some years ago,¹ and have recently verified by two exquisite specimens.

I have, in private and hospital practice, frequently met with the victims of seduction, and have occasionally heard the history of conception following a single intercourse, submission being obtained by persuasion or force, but have never before seen a case in which careful inquiry has so fully satisfied me of the truth of the statements made, as in the cases here reported. The facts to which I shall refer are gathered from the clinical histories of three sensible and respectable, but unfortunate girls; two of whom I confined on the second of March, whilst the third consulted me on the following day.

I have every reason to place full reliance upon the statements made, on account of the confidence shown me in all

¹ Engelmann. The Mucous Membrane of the Uterus. *Amer. Jour. of Obstetrics*, May, 1875, p. 18-21.

matters by the patients as well as their families; frequent questioning and cross-questioning has always elicited the same facts, and the truth of the most important history, (Case I.) I was again assured of by the suffering girl shortly before she succumbed to a septic peritonitis.

Case I.—Patient is an educated lady, 22 years of age; physically well developed, but nervous and troubled with menstrual irregularities; the intermenstrual period varying from four to six weeks.

The last menstrual flow appeared on the 28th of April; while on a visit five weeks later, on the 4th of June, as she was expecting the next period, she yielded to the seducer, with whom she had connection but once, as she returned to her home soon after. The expected flow did not appear; a normal pregnancy followed; on the 2nd of March, 272 days after impregnation, she was confined, and early on the 3d delivered of small but healthy twins.

Case II.—A well developed and unusually healthy young lady of 24 years yielded, for the first time, on the 4th of July; as she has never been regular, she is unfortunately not able to recall the date of the last sickness previous to this, her first coitus; however that may be, she never menstruated after it; and had connection but once more toward the end of July, at least three weeks after the first.

This patient was also confined on the 2nd of March, 242 days after the first intercourse, and was delivered of a fine healthy child, which, with but a few trifling differences bore all the characteristics of a child at term.

Case III.—On the 3d of March I was consulted by a girl of 24 years, daughter of a farmer, who, to all appearances seemed to be in the eighth month of pregnancy; the fundus uteri a hand's breadth above the navel, the navel pouting, ballotement distinct. Patient had menstruated last about the middle of July, and had yielded for the first time during the last days of the period, before complete cessation of the flow; connection was had but once at this time, and, although indulged in very frequently afterward, opportunity did not again offer for almost a month, which would

have allowed time for the recurrence of the menses had not conception taken place, and, judging from the development of the uterus and the position of the fetal head in the pelvis, gestation must have continued well over seven months and impregnation must have taken place during the last days of the menstrual flow.

The facts to which I desire to call attention are:

1. That conception accompanied defloration; in each of these cases the first intercourse proved fruitful.
2. That impregnation and insemination must have been simultaneous.
3. That conception occurred in one case (I.) just before the appearance of the catamenia, and in another (III.) during their continuance.
4. The duration of pregnancy was limited to 272 days, and in the case of premature labor (II.) just one month less, 242 days.

1. As a rule, the first coitus is not a fruitful one, but in the three cases above mentioned, conception followed the defloration; in Case I. this is evident, but might seem questionable in Cases II. and III. did we not have the best proofs to the contrary; Case II. was confined eight months, 242 days after the first intercourse, of a healthy, well developed child, which might well pass for a child at term; thus impregnation must have occurred consequent to the first intercourse and simultaneously with it; it could not possibly have resulted from the second coitus which took place three weeks later, and would have reduced the period of gestation to seven months, an impossibility, as the child was so fully developed that it could not be less than eight months old.

A similar reasoning applies to Case III; the development of the abdomen was at least that of seven and one-half months, so that conception must have taken place at the first intercourse, and could not possibly have resulted from the one next following, which took place a month later; moreover the menstrual flow did not return after the first intercourse.

2. With regard to the second point, that impregnation

immediately followed insemination, there can be no doubt, for the reasons already mentioned above; and again, in Case I, it could not be otherwise. As a proof of conception having taken place at once, after intercourse, the menstrual flow, which was hourly expected, did not appear.

3. The occurrence of conception, in Case I. just before the coming of the menses, and in Case III. toward the close of the period, during the continuance of the flow, is, to me, a clinical proof of the temporal relation between ovulation and menstruation, which I have again and again anatomically demonstrated, and find verified by every fresh specimen which I am enabled to examine..

The ovary shares in the congestion which invariably involves all the sexual organs of women during the menstrual period, and culminates in the rupture of the Graafian vesicle, and the discharge of a bloody fluid from the uterine mucosa, the menstrual flow; this is the climax, the depletion or outlet for the preceding congestion—the only symptom visible to us, and hence spoken of as menstruation.

Cases I. and III. serve admirably to demonstrate the truth of both of the opposing theories, each of which is so warmly maintained by its advocates, namely, that the ovum impregnated is the one developed for the period expected, belonging to the coming flow, (*Loewenhardt Archiv. f. Gynecologie*, 1872, iii, p. 456), which of course does not occur on account of impregnation; and that the ovum impregnated is the one developed at the last catamenia preceding the conception.

In Case I. the former theory holds good, and in Case III. the latter. The time of impregnation is the important and mostly unrecognized factor.

In Case I. impregnation took place during the menstrual congestion, just before the coming of the flow. The ovarian follicle was upon the point of bursting, and in the nervous excitement, and the additional congestion accompanying sexual intercourse, it was somewhat prematurely ruptured, as is not unfrequently the case.

In Case III. the ovum had already escaped from the follicle and was ready to be impregnated.

Anatomically I have found that the rupture of the Graafian vesicle generally occurs soon after the first day of the flow; thus in the specimen recently shown to the St. Louis Medical Society, by Dr. Briggs, (*St. Louis Med. and Surg. Jour.*, Mar. 20, 1880, p. 265); death from pulmonary hemorrhage on the third day of the catamenia, the fresh coagulum in the ovary gave evidence of recent rupture. In another specimen examined by me since then, death from traumatic peritonitis, on the fourth day after the appearance of the flow, a recent coagulum testified to the same condition.

4. With regard to the duration of pregnancy, Case I. can alone be considered, although it is extremely interesting to see that Case II. who conceived just one month later, on the 4th of July, (case I. on the 4th of June,) should be confined on the same day, the 2d of March.

In case I. the ovum was carried to full term, 272 days, a few days short of the ordinarily accepted period of gestation; the approach of labor pains being probably somewhat hastened by the intense anxiety and the mental strain under which the patient was laboring.

The duration of ordinary pregnancy, is placed at from 274 to 280 days, averaging about 278 days, whilst after single coitus, if we may follow Leishman, who quotes Dr. Reid—43 cases of single coitus—it is but 275 days; the time of gestation ranging from 260 to 300 days. Leishman himself cites one case of 273 days.

I could trace no exciting cause for the occurrence of premature labor, in case II.; it came on at the end of the eighth month of pregnancy, 242 days after conception, and here, as well as in labor at term, the monthly period seems an important factor. The time for the recurrence of the catamenia seems to be the term at which the ovum is expelled.

The remarks I have made, have been merely deductions from the cases before us, and with reference only to them, as I would not venture to generalize upon so narrow a basis.

